

2011-12 SQUIRREL HUNTING COOPERATOR SURVEY REPORT



KENTUCKY DEPARTMENT OF FISH AND WILDLIFE RESOURCES

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Thank you to all the hunter cooperators who sent in hunting logs for the Fall Squirrel Hunting Cooperator Survey. Your efforts are appreciated, and we encourage you to continue sending in your hunting logs. Encourage your hunting buddies to do the same! Survey participation has been decreasing over the past few years so be sure to recruit your friends. The following report will cover the results of last season's (2011-12) Fall Squirrel Hunting Cooperator Survey and the 2011 Mast Survey. Last season's harvest and hunting effort totals are included as well as the current population trends, along with an outlook for the upcoming season.

I. 2011-12 Fall Squirrel Hunter Cooperator Survey

The squirrel survey was developed in 1995 as a voluntary initiative. Hunters are asked to record data including date of hunt, county hunted, hours hunted, number of hunters, number of dogs, and number of fox & gray squirrels (seen, killed, and wounded), on a diary-type hunting log. Logs are available on the internet: www.fw.ky.gov/smallgame/logs.asp, or by calling **1-800-858-1549**. Hunters simply keep the log up-to-date as the hunting season progresses, and mail it to Kentucky Department of Fish and Wildlife (KDFWR) Headquarters when they're finished hunting for the season. Data collected from the survey gives the KDFWR information that can be used to monitor squirrel population trends in Kentucky and better serve the hunters of the state. Each year participating hunter cooperators are mailed a new hunting log, the results of the survey, and a small gift. Hunters who wish to receive a copy of their log from the previous year may call 800-858-1549 ext. 4545 or e-mail ben.robinson@ky.gov.

Summary of Last Year's Hunter Logs

Participation has been decreasing over the last six years. Once again, don't forget to mail in your log and encourage other squirrel hunters to do the same. Why not take someone new hunting this year? The future of hunting depends on it.

2011-12 Overview:

- Logs were received from 85 hunters.
- Hunters averaged 13.3 hunting trips throughout the season.
- 7.5% of hunts included the use of dogs.
- Average hunt lasted 2.7 hours.
- Data was provided from 1,144 hunts.
- Data was provided from 76 counties across Kentucky.
- Central Region = 696 hunts East Region = 278 hunts West Region = 170 hunts (*see Appendix A for regional map*)
- Hunters saw an average of 4.9 squirrels per **hunt**.
- Hunters saw an average of 1.8 squirrels per **hour**.

The number of squirrels seen by hunters decreased as the season progressed (Figure 1).

- Hunters saw an average of 4 gray squirrels per hunt and 0.8 fox squirrels per hunt.
- Hunters saw an average of 1.5 gray squirrels per hour and 0.3 fox squirrels per hour.

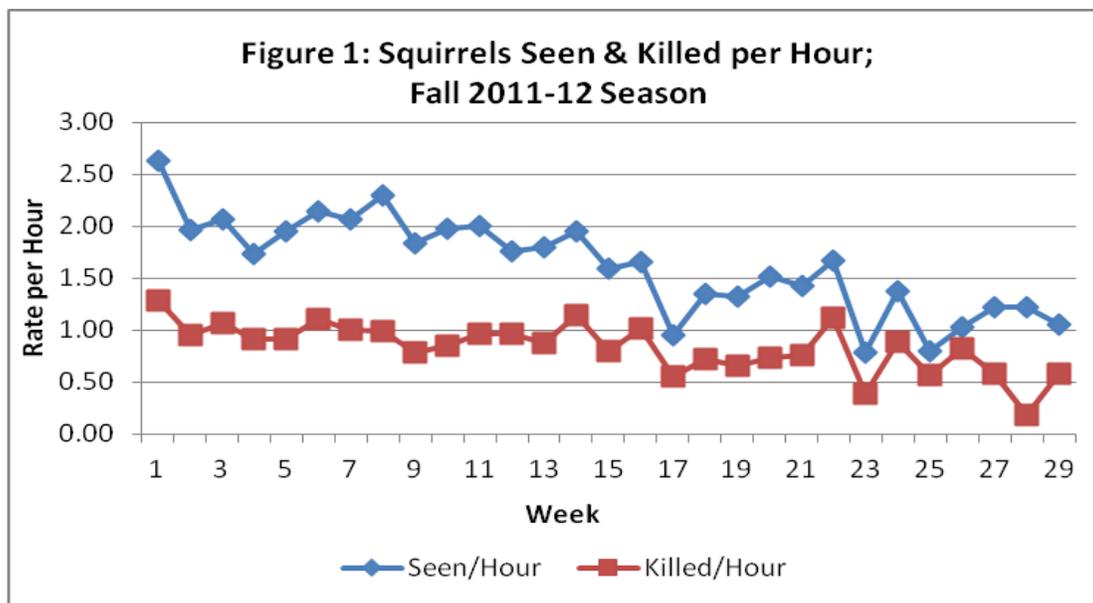


Table 1. Observation and harvest rates of fox and gray squirrels from Fall Squirrel Hunter Cooperator Surveys, 2005-2012.

Season	Fox Squirrels				Gray Squirrels			
	Seen		Harvested		Seen		Harvested	
	Hour	Hunt	Hour	Hunt	Hour	Hunt	Hour	Hunt
2005-06	0.3	0.7	0.2	0.4	1.3	3.2	0.7	1.7
2006-07	0.4	1.1	0.2	0.6	1.5	4.1	0.7	2.0
2007-08	0.3	1.0	0.2	0.5	1.4	3.9	0.7	1.8
2008-09	0.5	1.3	0.2	0.5	1.1	3.0	0.5	1.4
2009-10	0.3	0.9	0.2	0.5	1.5	4.0	0.7	2.0
2010-11	0.5	1.4	0.3	0.7	1.4	3.7	0.6	1.7
2011-12	0.3	0.8	0.2	0.4	1.5	4.0	0.8	2.0

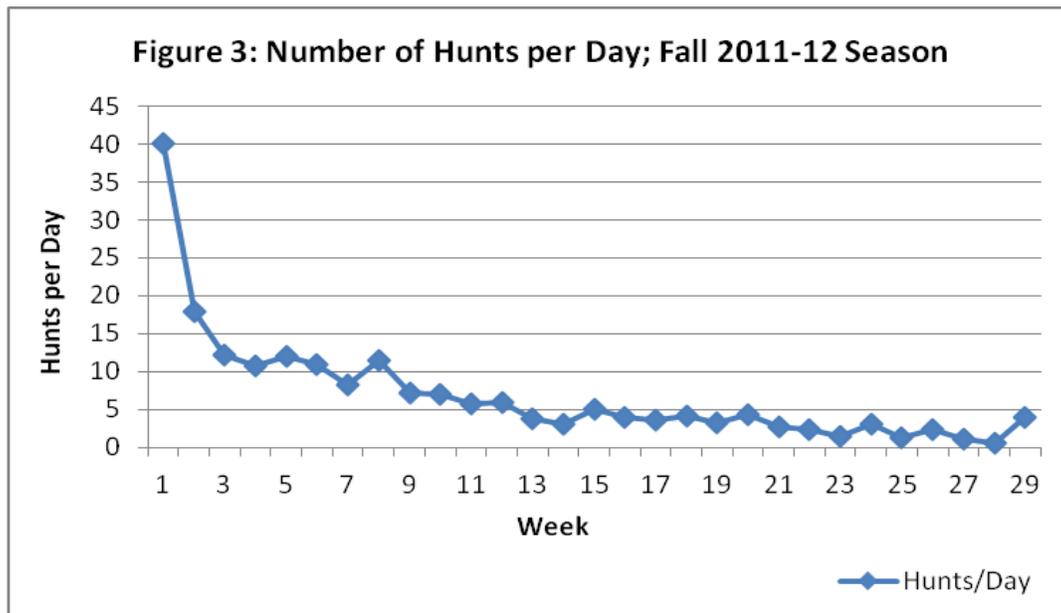
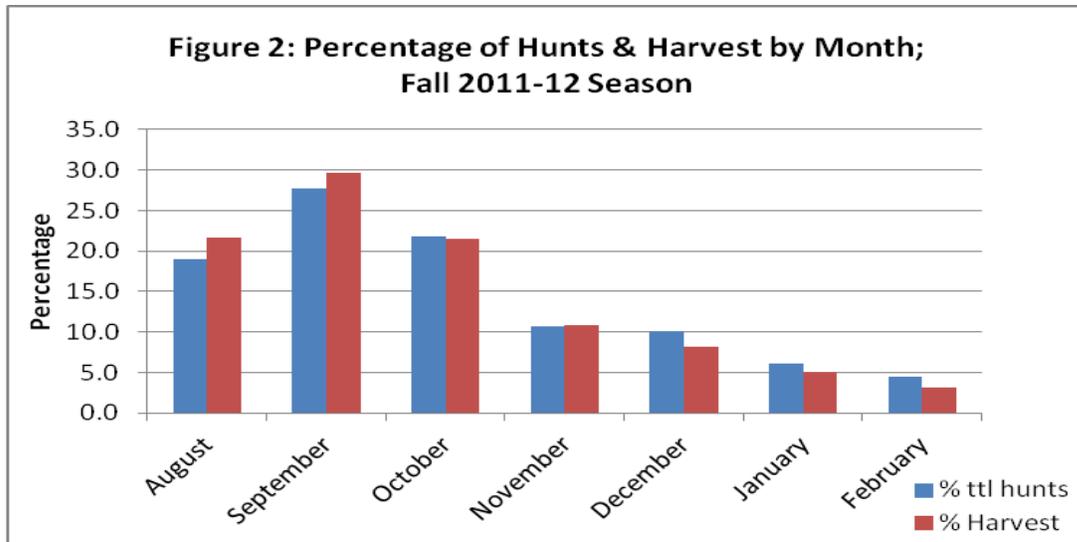
Table 2. Summary of Fall Squirrel Hunter Cooperator Survey data, 2005-2012.

STATISTICS	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12
Total cooperators	95	171	129	117	109	97	85
Total hunts	1165	1794	1498	1320	1319	1134	1144
Total counties	88	106	100	88	91	82	76
Average hunts/cooperator	12.3	10.5	11.6	11.3	12.1	11.6	13.3
Total hours	2955	4982	4097	3566	3499	2946	3063
Hunts using dogs (%)	22.6	31.0	14.0	13.0	11.0	7.0	7.5
Total fox squirrels seen	846	2060	1508	1764	1254	1625	947
Total fox squirrels killed	482	1046	683	726	653	818	487
Total fox squirrels wounded	9	73	50	52	66	52	40
Total gray squirrels seen	3712	7420	5901	4076	5321	4184	4684
Total gray squirrels killed	1926	3667	2712	1822	2744	1895	2315
Total gray squirrels wounded	96	282	224	132	206	153	177
Harvest of squirrels seen (%)	52.8	49.7	45.8	43.6	50.8	46.7	49.7
Squirrels wounded (%)	2.3	3.7	3.7	3.2	4.0	3.5	3.8
Hunting mortality (%)	55.1	53.4	49.5	46.7	54.8	50.2	53.6

Hunter Effort

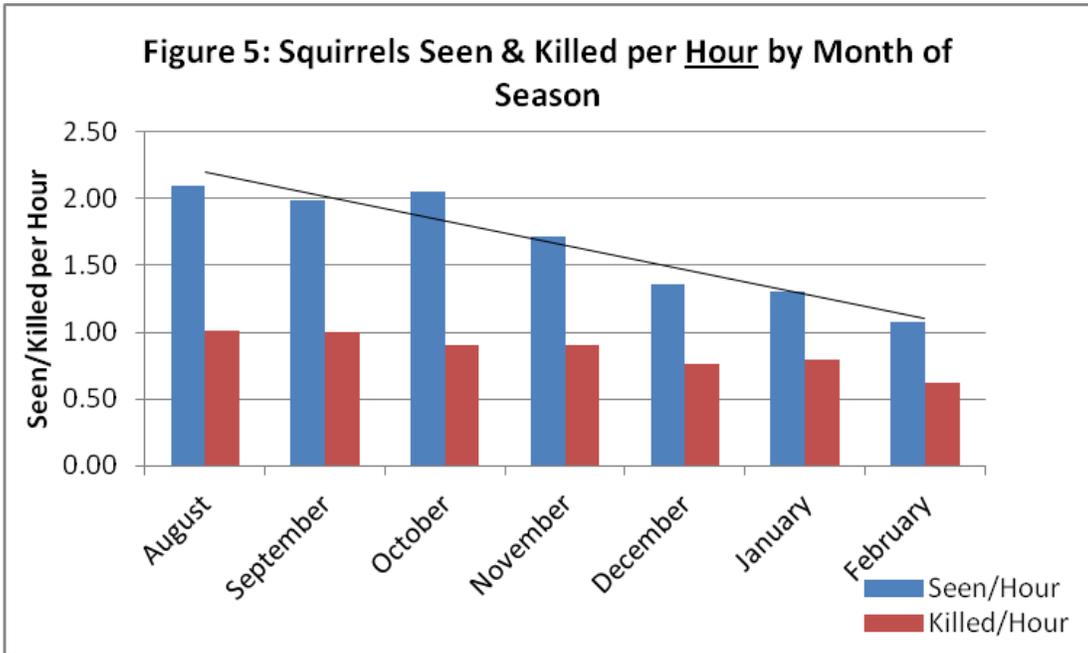
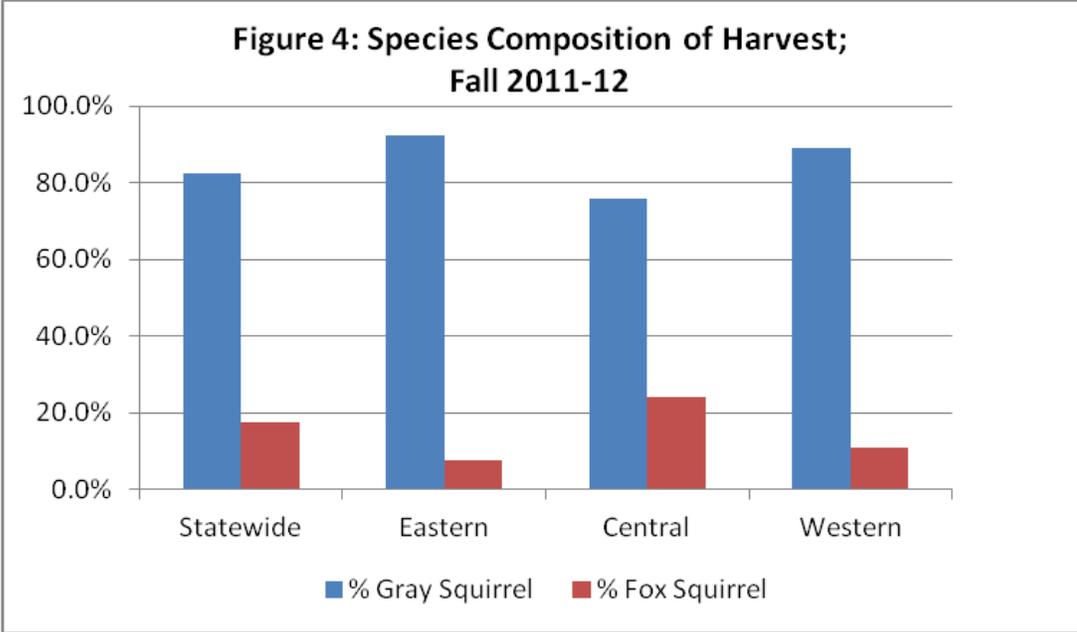
Hunting effort was greater towards the beginning of squirrel season. Sixty-eight percent of the hunts took place in August, September, and October (Figure 2).

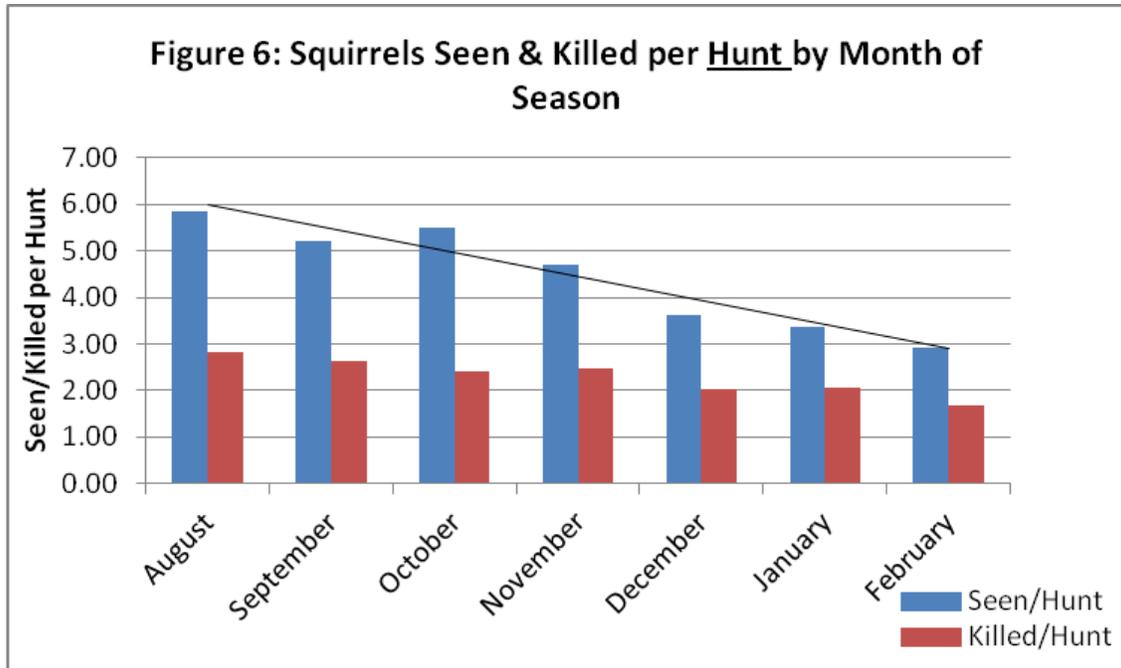
The hunter effort index declined as the season progressed, and squirrel-hunting trips were rare in January and February (Figure 3). Squirrel hunting is one of a few seasons open in August and September, and later season opening dates for deer, waterfowl, rabbit, grouse, and quail may account for the greater hunting effort taking place towards the beginning of squirrel season. The percentage of hunts dropped beginning in November, with only 10.7% of the total hunts occurring in this month (Figure 2). The drop in hunting rate was likely a direct result of the onset of deer gun season. Historical Hunter Cooperator data shows a similar trend.



Harvest

- Hunters harvested 49.7% of squirrels seen and wounded 3.8%. Assuming wounded squirrels did not survive, the hunting mortality rate was 53.6% of squirrels seen in 2011-12.
- Statewide, 83% of the harvest was comprised of gray squirrels (Figure 4). The rate suggests Kentucky squirrel hunters prefer hunting in more extensive forests and woodlands, common to gray squirrels, than small woodlots and fencerow-type habitats where fox squirrels are often found. It also implies that gray squirrels are more abundant than fox squirrels.





II. 2012 Mast Survey Results

A statewide mast production survey of Kentucky's most important producers of wildlife foods was initiated in 1953 and has been conducted annually thereafter. A close relationship has been found between a given year's mast production and the following year's squirrel population level statewide. The mast survey looks at the 3 primary mast producing tree groups (hickories, red oaks, and white oaks) with American beech being the only individual species surveyed.

Summary of the Survey

The chart (mast results) shows the proportion of trees bearing acorns (PBA) or other mast across Kentucky. As an example, 52.0% listed in the white oak row means that for every white oak tree surveyed in Kentucky in 2012, an average of 52% of those trees contained acorns. Categorically, this was considered an “average” white oak mast crop. Statewide, mast production in 2012 was average or above average for white oak trees, hickories, and red oaks. Beech trees produced little mast. According to our survey, acorns from red oaks were the most abundant hard mast food source for the third straight year.

Statewide

Mast Results:

	Failure 0-19%	Poor 20-39%	Average 40-59%	Good 60-79%	Bumper 80-100%
White Oak			52.0		
Red Oak				66.0	
Hickory			50.0		
Beech	19.0				

III. 2012-13 Fall Squirrel Hunt Forecast

The 2012 mast crop was rated “above average” for red oak and white oak and hickory were rated as “average”. Beech was rated “poor”. This meant that Kentucky’s forests did have quite a bit of mast present. Last year hunters saw an average of 1.1 squirrels per hour. Hunters should expect to see an average of 1.5 squirrels per hour this season, slightly above the previous season.

Don't forget to turn in your Hunter Cooperator log at the completion of this year's hunt. **Logs should be returned no later than May 31, 2013.** In return we'll send you a report and a small gift as a token of our appreciation.

Encourage all of your friends to log their hunts as well. Have a safe and enjoyable squirrel season and thanks again for your support! And don't forget to take someone new to hunting out with you this year.

